## REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-20 are pending in the application.

### Claims 1-3, 6, 8-12 and 15-18 under 35 U.S.C. 112, First Paragraph

Claims 1-3, 6, 8-12 and 15-18 were rejected under 35 §U.S.C. 112, first paragraph, as allegely failing to comply with the enablement requirement.

In particular, the Office Action alleged that the claim language of claims 1, 10 and 16 to "determine a randomness of the idle intervals based on prescribed minimum number of identified time intervals" is not described in such a way to make and/or use the invention. The Applicant respectfully disagrees.

The Examiner is directed to, e.g., the specification at Fig. 4A, 4B and 4C and their respective text. The specification describes at, e.g., page 6, lines 11-16, that Fig. 4A illustrates a logic analyzer that determines MAC slot times resembling a random distribution of slot times for collision delay intervals selected by a MAC over time during collision mediation. The specification describes at, e.g., page 6, lines 17-20, Fig. 4B illustrates a logic analyzer that determines MAC slot times resembling a low distribution equating to a random number generator within a MAC that is overly aggressive in capturing a network medium by tending to select too low a number of time slots for the collision delay interval. The specification describes at, e.g., page 6, lines 20-22, Fig. 4C illustrates a logic analyzer that determines MAC slot times resembling a high distribution equating to a random number generator within a MAC that tends to lose collision mediation by tending to select a high number of slot times for the collision delay interval. Thus, as described in the specification at lines 22-24, a tester can validate whether a MAC complies with the TBEB algorithm specified by the IEEE 802.3 protocol based on evaluating the distribution of slot times, as illustrated in Fig. 4A-4C.

The specification describes at, e.g., page 6 lines 1-6, that the minimum number of identified time intervals is based on statistically significant number of identified time intervals. Thus, the number of time intervals selected is chosen allow a tester to verify that a MAC complies with the TBEB algorithm.

One of ordinary skill in the art, upon reviewing the specification, would be able to

make and use the claimed invention, especially since the specification describes how a logic analyzer can be used to identify if a MAC selects slot times according to an even distribution (Fig. 4A) <u>indicating a random distribution</u>, or an uneven distribution (Fig. 4B and Fig. 4C) indicating a bias toward dominating or losing collision mediation repsectively.

The actual statistical correlation parameters to identify a distribution as even, a dominating bias, or a losing bias, is merely a matter of design choice that can be implemented without undue experimentation. Hence, the 35 §U.S.C. 112, first paragraph rejection of claims 1, 10 and 16 should be withdrawn.

The Office Action alleged that the language of claims 2, 11 and 17, i.e., a physical layer transceiver operating in a loop back mode, is not described in such a way to make and/or use the invention. The Applicant respectfully disagrees.

The specification describes at, e.g., page 6 lines 30-32, that a physical layer transceiver is configured in a loopback mode <u>for simultaneous transmission and reception of each attempted transmission of a data packet</u>. Thus, the loopback mode is described as a simultaneous transmission and reception of each attempted transmission of a data packet. Hence, the 35 §U.S.C. 112, first paragraph rejection of claims 2, 11 and 17 should be withdrawn.

The Office Action alleged that the language of claims 3, 6, 8, 12, 15 and 18, i.e., exposed media independent interface, is not described in such a way to make and/or use the invention. The Applicant respectfully disagrees.

The specification describes at, e.g., page 5, lines 9-11, that an exposed media independent interface is an <u>interface that enables connection of a logic analyzer</u> to selected lines of an exposed MII. Hence, the 35 §U.S.C. 112, first paragraph rejection of claims 3, 6, 8, 12, 15 and 18 should be withdrawn.

Hence, claims 1-3, 6, 8-12 and 15-18 fully comply with 35 §U.S.C. 112, first paragraph. The Applicant respectfully requests the Examiner withdraw the rejection of claims 1-3, 6, 8-12 and 15-18 under 35 §U.S.C. 112, first paragraph.

## Claims 1-20 under 35 §U.S.C. 112, Second Paragraph

Claims 1-20 were rejected under 35 §U.S.C. 112, second paragraph. In particular, the Office Action alleges that claims 1, 10 and 16 are allegedly unclear because the specification does not disclose what the determination of randomness means.

As discussed above, Fig. 4A illustrates a logic analyzer that determines MAC slot times resembling a random distribution of slot times for collision delay intervals selected by a MAC over time during collision mediation. In contrast, Fig. 4B and Fig. 4C illustrate that a logic analyzer determines MAC slot times resembling respectively a low distribution and a high distribution equating to a random number generator within a MAC that is overly aggressive and a MAC that tends to lose collision mediation. The specification clearly describes the determination of randomness, i.e., if a distribution of slot times is a random distribution of slot times, a low distribution of slot times and a high distribution of slot times.

One having ordinary skill in the art would recognize that the claimed feature of "determining a randomness of idle intervals", as described with respect to Figures 4A, 4B and 4C, refers to being able to identify the distribution of idle interval selection by the network device under test, for example being able to identify whether the network device under test follows an even distribution (as illustrated in Fig. 4A) and an uneven distribution (as illustrated in Figures 4B and 4C).

Claims 1-20 are clear as written with support from the specification supporting a determination of randomness. The Applicant respectfully requests the Examiner withdraw the rejection of claims 1-20 under 35 §U.S.C. 112, second paragraph.

## Claims 1, 5-7, 10, 13, 14, 16 and 19 over Hald

Claims 1, 5-7, 10, 13, 14, 16 and 19 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 4,945,532 to Hald. The Applicant respectfully traverses the rejection.

Each of the independent claims specify testing a MAC configured for generating random numbers for <u>idle intervals</u> in response to sensed collisions by determining a <u>randomness of idle intervals</u> based on a prescribed minimum number of identified time intervals.

Hence, a network device under test can be reliably tested to ensured that it complies with the randomness requirements of the IEEE 802.3 TBEB algorithm.

As admitted in the Office Action, Hald fails to disclose using the tester for individual network device testing and <u>monitoring of idle intervals</u> (Office Action, page 4). Moreover, the Office Action fails to address the claimed feature of detecting randomness. Hence, the Office Action fails to make a prima facie case of obviousness. See MPEP 2143.03 ("To establish prima facie obviousness of a claimed invention, <u>all the claim limitations</u> must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "<u>All words in a claim</u> must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)).

The Office Action also relies on Official Notice that "using the tester on networks testing and individual network devices testing is well known and expected in the art. The Applicant respectfully disagrees and requests the Examiner provide evidentiary support for the allegation as provided for under MPEP 2144.03.

Hald discloses a method and apparatus for testing a network segment (col. 9, lines 9-24), with no disclosure or suggestion of testing individual components within the network. Therefore, the Office Action's allegation that using Hald's tester on individual network devices is well known is contradicted by Hald that has no such capability.

Moreover, Hald discloses a tester that verifies proper functioning of the set of collision detectors contained in the transceivers and in the repeaters of both the network RLE and the ETHERNET type (Hald, col. 9, lines 19-24). Proper functioning is disclosed as complying with the "BACKOFF" algorithm defined by IEEE 802.3 as trying to retransmit a same frame 16 times (Hald, col. 11, lines 38-47). Thus, Hald is simply

testing that the collision detectors in transceivers and repeaters are working and retransmit the specified number of times, **NOT** examining the time period between re-transmissions, i.e., the **idle intervals**.

Moreover, even if Hald disclosed or suggested testing individual components (which Hald fails to do), the Office Action acknowledges that Hald fails to disclose monitoring of idle intervals. Regardless, the Office Action fails to establish a prima facie case of obviousness because the hypothetical combination fails to disclose or suggest determining a randomness of idle intervals based on a prescribed minimum number of identified time intervals, as acknowledged by the Office Action.

Moreover, "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Fritch, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). Halt discloses a tester for verifying the operation of collision detectors (col. 9, lines 19-24), **not** verifying the collision mediation is compliant with the TBEB algorithm specification. Thus, Halt fails to suggest the desirability of the modification alleged by the Examiner.

For these and other reasons, the rejection should be withdrawn. Accordingly, for at least all the above reasons, claims 1, 5-7, 10, 13, 14, 16 and 19 are patentable over the prior art of record. It is therefore respectfully requested that the rejection be withdrawn.

## Claims 2-4, 8, 9, 11, 12, 15, 17 and 18

Claims 2-4, 8, 9, 11, 12, 15, 17 and 18 were not rejected under 35 U.S.C. §102 or 35 U.S.C. §103 over the cited prior art. Therefore, the Applicant respectfully requests the Examiner formally that indicate claims 2-4, 8, 9, 11, 12, 15, 17 and 18 contain allowable subject matter.

## Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the subject application is in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-379, and please credit any excess fees to such deposit account.

Respectfully submitted,
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